PACKAGE LEAFLET: Information for the patient

PROZERINE

Solution for injection – 0.5 mg / 1 ml

(Neostigmine metilsulfate)

Read all of this leaflet carefully before you start using this medicine.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If any of the side effects gets serious, or if you notice any side effects not listed in this leaflet, please tell your doctor or pharmacist.

In this leaflet:

1. WHAT PROZERINE IS AND WHAT IT IS USED FOR

Prozerine contains the active substance neostigmine metilsulfate, which inhibits cholinesterase activity and thus prolongs and intensifies the physiological actions of acetylcholine. It probably also has direct effects on skeletal muscle fibres. The anticholinesterase actions of neostigmine are reversible.

After parenteral doses, Prozerine is excreted in the urine both as unchanged drug and metabolites. It undergoes hydrolysis by cholinesterases and is also metabolised in the liver.

Prozerine is indicated:

- in the treatment of *Myasthenia gravis;*
- as antidote to the non-depolarising neuromuscular blockers;
- in the treatment of paralytic ileus and postoperative urinary retention.

Your doctor may have given you Prozerine for another purpose**.** Ask your doctor if you want to know why this drug has been given to you.

2. BEFORE YOU TAKE PROZERINE

Do not take Prozerine if you:

- are hypersensitive (allergic) to neostigmine;
- have mechanical gastrointestinal or urinary-tract obstruction;
- have peritonitis.

Take special care with Prozerine

Ask your doctor before you take Prozerine.

Prozerine should be used with special caution in patients with: bronchial asthma, arrhythmias, bradycardia, recent myocardial infarction, hypotension, peptic ulcer, vagotonia, epilepsy, hyperthyroidism, parkinsonism, renal failure and if you are pregnant and breastfeeding.

This drug should be used with extreme caution in patients who have undergone recent intestinal or bladder surgery.

Neostigmine should not be used during anaesthesia with cyclopropane or halotan; it may be used after anaesthesia.

When neostigmine is given by injection, atropine should always be available to counteract any excessive muscarinic reactions. Atropine may also be given before, or with neostigmine to minimise muscarinic adverse effects but this may mask the initial symptoms of overdosage and lead to cholinergic crisis.

Taking other medicines

Concomitant treatment with other drugs can affect or be affected by Prozerine.

Tell your doctor or pharmacist if you are taking, have recently taken any other medicines, including medicines obtained without a prescription. Do not forget to inform your doctor about the treatment with Prozerine if you are given another drug during treatment.

Drugs with neuromuscular blocking activity, such as: aminoglycosides, clindamycin, colistin, cyclopropane, and the halogenated inhalational anaesthetics, may antagonise the effects of neostigmine.

Drugs such as: quinine, chloroquine, hydroxychloroquine, quinidine, procainamide, propafenone, lithium, and beta blockers, that have the potential to aggravate *Myasthenia gravis*, can reduce the effectiveness of treatment with neostigmine.

Anticholinesterases, such as neostigmine, can inhibit the metabolism of suxamethonium and enhance and prolong its action. Combined use is not recommended. Antimuscarinics, such as atropine, antagonise the muscarinic effects of neostigmine.

Corticosteroids may antagonise anticholinesterases in *Myasthenia gravis,* by causing deep muscular depression.

Neuromuscular blockade caused by succinylcholine may be prolonged or antagonised by neostigmine.

Pregnancy

Ask for medical advice before taking this drug!

Category C.

This drug should be avoided during pregnancy and can be used only if the potential benefit outweighs the risk exposed to the fetus.

Breastfeeding

Small amounts of neostigmine are distributed into breast milk.

Use during breastfeeding should be avoided.

3. HOW TO TAKE PROZERINE

Always take Prozerine as prescribed by your doctor. If you are not sure, contact with your doctor or pharmacist. If you feel that the effects of Prozerine are too weak or too strong, talk to your doctor or pharmacist.

Injections may be given by the intravenous, intramuscular or subcutaneous routes.

Prozerine may be used as follows:

- in the treatment of *Myasthenia gravis*

It is given by subcutaneous or intramuscular injection to:

adults and children over 12 years, 1 – 2.5 mg at suitable intervals throughout the day (usual total daily dose 5–20 mg);

- as antagonist to the non-depolarising neuromuscular blockade

It is given by intravenous injection over 1 minute to:

adults over 18 years, 2.5 mg repeated if necessary (maximum 5 mg); the injection is administered after or with 0.6-1.2 mg atropine sulfate;

Glycopyrronium bromide has been used as an alternative to atropine sulfate.

- in the treatment of paralytic ileus and postoperative urinary retention

The usual dose is 500 micrograms of neostigmine metilsulfate by subcutaneous or intramuscular injection.

Administration in patients with renal impairment

The dosage of neostigmine may need to be adjusted in patients with renal impairment.

If you take more Prozerine

If you take more Prozerine than you should, or if the children take it accidentally, please contact your doctor, the hospital or any medical care site to seek advice on the risk and the appropriate measures.

Overdosage may lead to a ‘cholinergic crisis’, characterized by both muscarinic and nicotinic effects.
These effects may include: excessive gastrointestinal disorders, excessive sweating, bronchial secretion, involuntary defaecation and urination, miosis, nystagmus, bradycardia, hypotension, agitation, weakness till paralysis.
Atropine can be used as antidote against muscarinic effects.

If you forget to take Prozerine

If you forget to take one dose (or more than one dose), take the next dose in its usual time.
Do not take a double dose (or more) to make up a forgotten dose (doses).
If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

4. POSSIBLE SIDE EFFECTS

Like all medicines, Prozerine can cause side effects, although not everybody gets them.
During therapy with Prozerine the adverse effects include: nausea and vomiting, increased salivation, diarrhea, abdominal cramps (more expressed in high doses). Other side effects that may occur which have an undefined frequency are: hypersensitivity, angioedema, anaphylactic reaction, miosis, increased lacrimation, bradycardia, decreased cardiac conduction in severe cases possibly leading to heart block or cardiac arrest, hypotension, increased bronchial secretion, bronchospasm, involuntary defecation, salivary hypersecretion, muscle spasms, urinary incontinence.

5. HOW TO STORE PROZERINE

Keep out of the sight and reach of children!
Do not use Prozerine after the expiry date which is stated on the package.
Do not store above 25°C!
Keep in the original package to protect it from light.

6. FURTHER INFORMATION

What Prozerine solution for injection contains

The active substance is neostigmine metilsulfate.

Each ampoule 1 ml contains 0.5 mg neostigmine metilsulfate (0.05 %).

The excipients are: hydrochloric acid may be added for pH-adjustment, water for injections.

Content of the pack

Box with 10 ampoules 1 ml.

Marketing Authorisation Holder (MAH) and Manufacturer:

PROFARMA Sh.a.,

St. “Skënder Vila”,

Tirana, Albania.

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